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ABSTRACT

To examine whether voting behavior is a good indicator of public opinion toward controversial issues such as nuclear power, a study was undertaken to assess the meaning of the defeat of Proposition 15 in California in June, 1976. Proposition 15 called for more stringent legislative regulation of the nuclear power industry. Specifically, the study assessed how issues relating to the initiative were perceived by different segments of the electorate. The study consisted of a survey of 1,000 randomly selected Sacramento County voters and of statistical analysis of the 633 valid returned questionnaires. Questions on the four-page questionnaire dealt with sources of information about Proposition 15 and nuclear power plant energy in general, satisfaction with the political structure of the United States, and demographic and socioeconomic information. Findings indicated that confusion over the wording of Proposition 15 caused many voters (particularly opponents) to vote incorrectly in terms of their own preferences for or against nuclear power. In general, findings indicated that the initiative was opposed by older, more conservative, and more affluent voters concerned with a high standard of living and favored by younger, more liberal, less affluent and conservation-minded voters. It is concluded that studies of voting behavior with regard to a specific controversial issue can provide information about voter perceptions and attitudes to individuals concerned with political strategy and policy formation. (KC)

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VOTER ATTITUDES ON THE 1976 CALIFORNIA NUCLEAR INITIATIVE

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SP-01145

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TABLE OF CONTENTS

List of Tables ii
Acknowledgments iv
Foreword v

I. INTRODUCTION 1

II. SURVEY METHODOLOGY 6

III. OVERVIEW OF THE ELECTORATE 10

IV. DEMOGRAPHIC PROFILE OF YES AND NO VOTERS 20

V. ATTITUDINAL DIFFERENCES BETWEEN PROPONENTS AND OPPONENTS 28

VI. THE CONSERVATION QUESTION 37

VII. SOCIO-POLITICAL CHARACTERISTICS 41

VIII. INFORMATION: SOURCES AND CREDIBILITY 48

IX. CONCLUSION 51

TABLES

1. Judgment of Those Who Voted Opposite to You 12

2. Attitudes toward Statements Concerning Energy, Nuclear Power, and Proposition 15 13

3. Main Difficulties with Peaceful Application of Nuclear Energy 16

4. How Much Would You Be Willing to Reduce Use of Household Electricity to Contribute to Energy Conservation? 18

5. Sources from Which Information Was Received on Proposition 15 or Nuclear Power 19

6. Relationship between Vote on "15" and Age 22

7. Relationship between Vote on "15" and Income 23

8. Relationship between Vote on "15" and Education 23

9. Relationship between Vote on "15" and Party Registration 25

10. Relationship between Vote on "15" and Senate Choice 26

11. Relationship between Vote on "15" and Presidential Choice 26

12. Standardized Regression Coefficients for the Prediction of the Vote on "15" by Demographic & Socioeconomic Variables 27

13. Relationship between Vote on "15" and Judgment of Voters Opposite of You 29

14. Relationship between Vote on "15" and Attitudes toward Nuclear Power 30

15. Relationship between Vote on "15" and Perceived Major Difficulty with Peaceful Application of Nuclear Energy 33

16. Relationship between Vote on "15" and Conservation Attitudes 38

17. Relationship between Vote on "15" and Willingness to Reduce Electrical Usage 40

18. Relationship between Vote on "15" and Satisfaction with Conditions in America Today 42

19. Approval of Country and Vote on "15" 42

TABLES, cont'd.

20. Relationship between Vote on "15" and Attitude toward Government Service 43

21. Relationship between Vote on "15" and Political Attitudes 45

22. Relationship between Vote on "15" and Attitude toward Competence of Ordinary Citizens on Nuclear Safety 47

23. Relationship between Vote on "15" and Attitude toward Competence of Experts on Nuclear Safety 47

24. Relationship between Vote on "15" and Source and Reliability of Source of Information 49

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While expressing gratitude to others, the authors of course accept sole responsibility for all errors of fact or interpretation which may be found in this study.

AJG
HGS

FOREWORD

As public opposition to nuclear power has grown, so too has interest in the explanation of this phenomenon. We are very pleased that this first publication in the new Environmental Quality Series, now a joint endeavor of the Institute of Governmental Affairs and the Institute of Ecology, is an important addition to our understanding of what must rank as one of the most remarkable political developments in recent years.

Quite apart from the intrinsic interest of the subject, improved understanding of public attitudes toward nuclear power may have important policy consequences. In the weeks following the June 8, 1976, vote on the California initiative (Proposition 15), both opponents and proponents of nuclear power were claiming victory. More important, they were assessing the meaning of the vote for future political strategy. A similar *post hoc* reading of the tea leaves followed the November 2, 1976, general election, in which nuclear initiatives appeared on the ballots in Washington, Oregon, Montana, Arizona, Colorado, and Ohio. In none of the seven states where it was possible in 1976 for voters to act on the basis of their views of the issues did the nuclear initiatives pass. But even though six states have now followed California's lead, first in placing a measure on the ballot and second in rejecting it, the strategic implications of the votes are far from clear.

Representatives of the nuclear power industry have claimed that the election outcomes represent a vote of confidence in plans to increase significantly the proportion of total United States energy requirements met by nuclear power in 1985 and beyond. Leaders of the opposition--though concerned about the huge campaign funds of the pro-nuclear forces (who in California outspent the initiative backers by five to one)--have spoken with equal confidence of their ability to snatch ultimate victory from the jaws of apparent defeat this year. They still look with enthusiasm to the development of non-nuclear alternatives and are optimistic about the prospects for energy savings through conservation.

Much of the difficulty in knowing what, if anything, the returns on Proposition 15 in California, and those on the other state propositions, portend for nuclear power policy arises from the paucity of systematic analysis of the attitudes and behaviors involved. The present study is unusual in that it deals with the perceptions and attitudes of people who actually voted in the California June election. And it does so in a way designed both to minimize post-election rationalizations of voting behavior and to maximize the representativeness of the sample of voter responses obtained.

Dr. Groth and Dr. Schutz are to be commended for their restraint in interpreting the meaning of this first cut at these fascinating data. Others may be less restrained, finding in the tables that accompany the report just the confirmation they have been looking for of a trend or configuration in attitudes that will vindicate their position in the nuclear power debate.

While it is proper for us to reiterate the words of caution in the report itself about reading into it more than the authors intended to place there--a warning that nuclear power partisans in particular should heed--we also want to alert readers to at least some aspects of the larger context in which the study can be set.

On the theoretical side, one of the most intriguing findings of the study is that relating to the group of voters in the sample whom the authors label as the "misunderstoods." These are people whose voting behavior is an incorrect reflection of their preferences, as revealed in their responses to items on the survey questionnaire. Misunderstanding appears to have been more prevalent among the proponents of nuclear power than among the opposition. As a result, in a close election the understatement of the votes of nuclear power proponents, especially those who are less educated, poorer, and older citizens, could yield an election outcome unreflective of voter preferences. The authors recommend better ways of communicating the issues to the voters, especially by clarifying the language of the ballot.

The question, of course, is whether better understanding on the part of the "misunderstoods," both before an election and on the ballot at the time of voting, would leave their preferences and votes unchanged. On this issue, the present study appears to side with those who argue that the more people know about the nuclear power controversy the more they are inclined to favor continued development of nuclear plants. At the very least, the authors seem to be saying, people who favor nuclear power, regardless of the level of their knowledge about it and its consequences, should not be led by obfuscatory statements of the issues to vote against their perceived interests.

Other research conducted under the auspices of Project RARE suggests, contrary to some of the early surveys of attitudes toward nuclear power, that as public understanding increases, so too does opposition to nuclear power. Arguing that level of education, one of the distinctive attributes of the "misunderstoods," may be a better measure of social class than of the cognitive basis of attitudes, Kasperson et al. (following Campbell and others who have used the funnel of causality model of American voters) examined directly the relationship between attitudes and levels of individual knowledge about nuclear power. Their finding is that knowledge is inversely related to support for nuclear power and that the influence of this intervening knowledge variable on behavior may be greater than that of more distant educational and social class variables (Roger Kasperson et al., "Nuclear Energy, Local Conflict and Public Opposition," Project RARE Review Draft, Graduate School of Geography, Clark University, Worcester, Mass., August 1976).

Perhaps the most we can say at this point is that clearer understanding by voters of the issues posed by initiatives such as Proposition 15 may have consequences for their attitudes and behavior that are at best ambiguous. Certainly the question of why people develop their attitudes toward nuclear power, how these change over time, and how they come to be reflected in voting behavior is at the theoretical center of interest of research such as that reported here; it is one on which future analyses may shed more light.

On the practical side, this study of the California nuclear initiative raises the question of how effective the initiative process is for dealing with issues as complex as nuclear power, particularly action to remedy the present distribution of costs generated by its development. The authors do not directly address this question, although they do observe that, in the California case at least, politicization of the issues through the initiative process has yielded a marked polarization of attitudes.

Thus, it is possible that what opponents of nuclear power gain on the swings of initiative voting, by drawing public attention to the issues and arousing concern, they may lose in the more conventional political processes in legislatures and administrative agencies by being unable to claim the support of those the initiative campaign alienated. And it seems likely that it is through legislative and administrative channels, rather than by continuing and repeated public referenda, that the issues will be resolved one way or another.

We are reminded of the analysis done by a UCD political scientist on the outcome of another California initiative, one that appeared on the November 1970 general election ballot. He was struck by the imbalance among the contending forces in that case, one side being able to sustain a disproportionately well-financed propaganda campaign. He wondered if the electorate might not, therefore, be said to have lacked the balanced information that conventional democratic theory presupposes as a necessary condition of intelligent, informed, and, in one sense, rational public decisions.

He asked whether a test of the issues posed by the initiative might better have been made in the legislature and concluded that the answer was probably affirmative in that particular case, given the evidence at hand about how legislators responded to special-interest pressures against the initiative. He concluded more generally that the prospects for solving environmental problems through the political elites who dominate our political institutions might be better than those stemming from reliance on an aroused and mobilized electorate (L. L. Wade, *The Elements of Public Policy* [Columbus, Ohio: Charles E. Merrill, 1972], pp. 58-66).

Looking beyond the United States, it has to be said that handling of the nuclear power controversy by elite interaction rather than by direct vote of the electorate has had mixed results. In Britain, France, and Finland widespread public support for nuclear power has been evidenced. In Sweden, Norway, and Japan, on the other hand, there is substantial public opposition. In all these cases many variables, in addition to the choice of institutional arrangements for conflict resolution and policy development, may have influenced policy outcomes on nuclear power. We hope that at least some future titles in this series will address this issue and others, particularly insofar as analysis can be based on experience in California.

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VOTER ATTITUDES ON THE 1976 CALIFORNIA NUCLEAR INITIATIVE

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Howard G. Schutz†

I

INTRODUCTION

This study of public attitudes on the Nuclear Power Plants Initiative in California was conducted after the election of June 8, 1976, in order to discover how some of the issues relating to the initiative were perceived by different segments of the electorate.

The initiative, usually referred to as Proposition 15 during the pre-election campaign, called for more stringent regulation of the nuclear power industry in this state under the auspices of the legislature. It was defeated in the June 8 election by a margin of approximately 2 to 1, with a margin of defeat that was significantly higher in the southern part of the state than in the north. (Thus, in Sacramento County, where we conducted our particular study, the result was 60 percent against the proposition and 40 percent in favor. This north-south split has long been recognized in both national and state elections as something of a liberal-conservative division; while the findings of this study are not limited to this concern, they generally confirm a broad linkage between conservative political identifications and attitudes and opposition to the Nuclear Power Plants Initiative.

The nine chapters that follow deal with the survey methodology, an overview of the electorate, a demographic profile of Yes and No voters, attitudinal differences between proponents and opponents, the conservation question, socio-political characteristics, and information sources and credibility. The study ends with a brief summary and conclusion.

According to its authoritative supporters during the pre-election campaign, "Proposition 15 gives all Californians the right to be compensated for damages to themselves, their families and their property in the event of an atomic plant disaster. Proposition 15 will require assurance of these rights before any more of California's valuable land and resources are committed to atomic power development. That is all Proposition 15 says, no matter how much money the utility companies have spent trying to confuse people into thinking otherwise."

According to its authoritative opponents during the pre-election campaign, "If Proposition 15 passes, nuclear energy will be shut down in California. Such a shutdown will create several economic problems, more pollution, and arbitrarily cut off a vital energy source."[1]

---

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[1]*California Voters Pamphlet*, June 8, 1976, Primary Election, pp. 62-63.

The rather lengthy provisions of Proposition 15 were summarized by a publication of The California League of Women Voters in three basic questions:[2]

> Should the Legislature be required to evaluate the safety systems of nuclear power plants and the means of storage and disposal of nuclear wastes?
>
> Should the Legislature require the phasing down of nuclear power plant operations if it is not satisfied with the safety of the plants and the nuclear waste storage or disposal methods?
>
> Should the removal of federal insurance liability limits and the assurance of full compensation be required as a condition of allowing construction of nuclear plants in California?

Beyond the letter of the law, however, a number of arguments and charges were advanced by the proponents and opponents of Proposition 15 during the long and heated election campaign. Among the frequent claims of supporters were the contentions that

--the safety of nuclear power plants was very much in doubt

--risks of nuclear accidents damaging to the human environment were both real and grave

--the nuclear power industry had proved to be a costly failure

--rising uranium prices made the long-range economic prospects of nuclear energy doubtful

--it was more important and useful to spend public resources on conservation and new, safe sources of power than on further investments in nuclear energy projects

--the utility companies operating the nuclear plants were concerned with profit and not with public safety

--scientists were unable to agree on the nuclear safety issue, and it was therefore both necessary and morally right, considering the magnitude of the risks, to turn the whole question over to the people and their representatives in the state legislature

--nuclear power plants should be allowed to operate only under more stringent security and safety regulations, and with more liberal insurance provisions for compensating victims of possible nuclear accidents and malfunctions

---

[2]League of Women Voters, *Proposition 15* (San Francisco: 1976), pp. 13-14.

--the nuclear industry had not anticipated and adequately prepared for the removal of radioactive waste disposal to safe sites

--the industry had not assured denial of access to terrorists and other potentially dangerous individuals

--no realistic laws had been provided for the evacuation of people in case of major accidents.[3]

Among those opposing Proposition 15, arguments were advanced to the effect that

--nuclear power had been proved safe over the years

--risks of accidents were very small and greatly exaggerated by proponents

--Proposition 15 was so excessive in its requirements (particularly in view of the two-thirds vote needed in each house of the state legislature for approving safety systems proposed by the operators) that it was tantamount to a nuclear shutdown

--what the state (and the nation) needed was more, not fewer, energy sources

--conservation could not adequately compensate for the loss of nuclear power

--the restrictions of Proposition 15 would raise the costs of energy and every householder's utility bill

--the general effect on the California economy would be adverse, with increased unemployment as a consequence of nuclear plant shutdowns

--some of the alternative sources of power such as solar or geothermal energy would actually take many years to develop, creating a gap in California's energy supplies

--some of the current substitutes for nuclear energy, such as coal and oil, would add severely to air pollution problems in the state

---

[3]See R. Gillette, "One Danger of Nuclear Progress: Nuclear Waste," the *New York Times*, May 11, 1976. See also the Californians for Nuclear Safeguards handbill, "2,300 Scientists Petition U.S. to Cut Construction of Nuclear Power Plants," reprinted from the *New York Times*, August 7, 1975; and Project Survival, "How Safe is Nuclear Power?" (Palo Alto: May 1976).

--the adoption of Proposition 15 would increase American dependence on foreign sources of energy, particularly upon Arab oil.[4]

It was observed in a study done by Mervin Field some three months before the election that

> The controversy around this issue has involved the scientific community, the nuclear power industry, government regulatory bodies, political figures, and a variety of segments of the general public. The effects of this initiative go far beyond California. Passage of the measure would slow down if not halt development of the nuclear power industry here and in other parts of the country. Defeat of the California initiative, on the other hand, would remove an obstacle to plans for the development of nuclear energy here and in other parts of the country.[5]

Three weeks before the election, the California Field poll had concluded that "the public is having difficulty sorting out the conflicting arguments on Proposition 15," with 63 percent of sampled voters wanting to "hear more about it" before deciding. Field also concluded that while a majority of the voters inclined to vote No on Proposition 15, there was greater intensity of commitment among those saying that they would vote Yes. The Field poll discovered considerable confusion among voters with respect to what a No or Yes vote would mean. It also discovered "fairly strong agreement that nuclear energy is important" among prospective Yes voters, though a majority appeared to want future construction of nuclear power plants stopped.[6]

In a study conducted in mid-April, the Field poll had discovered that among those indicating support of Proposition 15, the largest number, some 34 percent, had indicated that the dangers of explosion, accident, or earthquake were their principal concerns relating to nuclear energy plants; the next largest category, some 24 percent, were described by Field as people who "say they will vote Yes but offer what appear to be reasons for voting No." Among the opponents of the proposition the largest number, some 32 percent,

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[4]See, e.g., summary in "Nuclear Power: Fail-Safe or Not?" in *State Government News*, March 1976, pp. 1-7; American Nuclear Society, *Nuclear Power and the Environment: Questions and Answers* (Hinsdale, Ill.: April 1976); League of Women Voters, *Proposition 15*, pp. 13-14; and *California Voters Pamphlet*, pp. 62-63. See also No on 15 Committee, Californians against Nuclear Shutdown, *Why We Oppose Proposition 15*, May 9, 1976; and California Council for Environmental and Economic Balance, *The Nuclear Debate: A Call to Reason* (San Francisco: September 1976).

[5]See "Nuclear Initiative Gaining Public Awareness," *Sacramento Union*, March 4, 1976.

[6]The California Poll, Tuesday, May 18, 1976, Release #905.

expressed concern with having adequate power/energy sources, while the next largest category was made up of people (16 percent) who "say they will vote No but offer what appear to be reasons for voting Yes."[7]

Given the significance of the issue on the one hand, and the uncertainty regarding public perceptions on the other, our study was designed to probe the attitudes of people who had actually voted in the June 8 election. These were people living within the confines of Sacramento County only, and they were polled in somewhat greater depth than is usual in most public polls; some eighty questions were addressed to our interviewees.

What follows is primarily a descriptive report. Further analysis utilizing multivariate techniques applied to demographic, socioeconomic, *and* attitudinal variables will be published at a later date.

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[7]The California Poll, April 16, 1976, Release #897.

II

SURVEY METHODOLOGY

Questionnaire

The questionnaire was a four-page, self-administered format containing questions on the vote on Proposition 15, sources of information utilized and their reliability, attitudes toward nuclear power plant energy in general, satisfaction with the country and political structure, and demographic and socioeconomic information.[8]

Sampling

The population chosen was the actual body of Sacramento County precinct voters (201,035) in the June 8, 1976 primary election. The sample was multi-stage, cluster disproportionate systematic random type. Two hundred precincts were chosen at random from the total of 594 in Sacramento County. From the list of voters in each precinct (supplied by the Registrar of Voters in Sacramento County) 5 were selected by a systematic random sampling with a random starting point. This sampling procedure yielded 1,000 voters' names and addresses. Party identification and sex, available in precinct listings, were recorded for each member of the sample.

Questionnaire Distribution

The questionnaire, a letter of explanation, and a self-addressed stamped return envelope was sent to each of the 1,000 respondents on June 28, 1976. This was the earliest mailing possible since the voter list is not available from the Registrar of Voters until two weeks after an election. On July 3, 1976, a reminder postcard was sent to all respondents. A second questionnaire was mailed on July 19 along with a more aggressive letter and self-addressed stamped envelope to those who had not yet returned their questionnaires. A final reminder card was sent on July 26 to those who had still not returned their questionnaires, with a one-week deadline for return. On August 23, approximately eight weeks from the date of the original mailing, the survey was considered completed.

Response to Mailings

There were 15 undelivered questionnaires and 38 which were returned but considered invalid (blanks, less than half completed, nonsense answers, etc.).

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[8]The questionnaire format and question wording were pre-tested by having twenty individuals, chosen to represent a range of education and age, fill out the preliminary questionnaire. The protocols were reviewed in detail with the respondents, and based on these findings a final questionnaire was developed.

The remaining valid questionnaires numbered 633, which represented a 64.3 percent return rate on delivered questionnaires.

It may be noted that the return of our questionnaires took place between June 28 and August 22, 1976--a period of eight weeks and a total of eleven weeks from the date of the election. Since there was a possibility that within such a time period significant shifts in voter attitude might occur which could affect the validity of our results, we undertook several analyses to check out this potential for distortion. Clearly, information reported in the media, as well as any number of events directly perceived by respondents subsequent to the election might influence such voter attitude changes. To begin with, we found that 93 percent of our respondents indicated they would *not* vote differently at the time they filled out the questionnaire. In addition, our cross-tabulations by week-of-return against a variety of attitudinal variables, and the reported vote on "15," revealed that there was no statistically significant trend based on the time of questionnaire return.

Non-Response Bias Examination

Several avenues of examination were utilized to gain evidence on the possibility of a non-responders' bias. A comparison of the final sample voter registration distribution with that of the population indicated a close concordance (Democrats, 62 percent of electorate, 62 percent of sample; Republicans, 34 percent of electorate, 33 percent of sample; Non-Partisan 3 percent of electorate, 3 percent of sample). Examination of the cross-tabulation of week-of-return versus age, education, sex, income, party, and vote on Proposition 15 revealed no significant relationships. This would support the concept that those returning their questionnaire later did not differ from the earlier returners. A comparison of the vote on Proposition 15 between our sample and the electorate of Sacramento County as a whole indicated that there was indeed a higher percentage of Yes voters in the sample than in the electorate. This may have been due to the greater intensity of preference among the Yes voters--a factor for which we find some support in our data elsewhere. (See Table 13, e.g.) It is also likely that some of these voters, disappointed by the results of the balloting, were using the questionnaire as an opportunity to vent some of their feelings and reactions. In any case, there were 49 percent Yes voters in our sample as compared with 40 percent in the electorate.

Correcting for Sampling Procedures and Results

A weight was applied to each case for the calculation of percentages for the whole sample which would allow for the most accurate population prediction. This technical weighting system corrected for the number of respondents in a cluster, cluster size and numbers, and the total size of the clusters chosen.[9]

[9] $\text{Weight} = \frac{\text{total population}}{\text{sample population}} \times \frac{\text{\# clusters selected}}{\text{total \# clusters}} \times \frac{\text{total \# clusters}}{\text{\# clusters selected}} \times \frac{\text{cluster size}}{\text{elements selected per cluster}} \times \frac{\text{elements selected per cluster}}{\text{elements studied}}$

or $\frac{201,035}{67,503} \times \frac{200}{594} \times \frac{594}{200} \times \frac{\text{cluster size}}{5} \times \frac{5}{\text{elements studied}}$

The utilization of these weights resulted in a trivial change in the percentages obtained. There were only a few variables which had differences between weighted and unweighted data of one percentage point; this indicated that we obtained a very robust sample.

Another weighting, not on a technical basis but rather as a way of reflecting the disproportionate number of Yes's and No's we obtained, was attempted. Here we weighted each Yes and No case so as to achieve the 60-40 actual county result on "15." Again, this weighting resulted in a very small change in all variables but the Yes-No rate, which naturally yielded the 60-40 breakdown. Here there were only about a dozen individual percentages that changed by as much as two percentage points. None of the changes made any substantial difference in the results. We ultimately decided not to include either weighting. Thus the percentages reported are based on the actual sample values and would, considering our weighting results, be close approximations of the figures for the electorate.[10]

Analysis

The frequency analysis was performed using the SPSS Codebook program; for cross-tabulations the SPSS Fastab program was used. For the cross-tabulation run by "Vote," eighty-one cases were removed from the analysis. These were ones in which the respondent stated he/she voted a Yes or No and then, in the next open-ended question (as to why the respondent voted that way), gave a reason that was incompatible, i.e., a strong indication of the opposite vote. As another check on this decision, a series of other attitude questions were compared to the vote response for inconsistency. Both authors and a technician independently judged all the questionnaires for these "misunderstoods." The eighty-one cases represent unanimity of opinion in the coding. As a further check on the role of these selected respondents, cross-tabs were run on Yes and No versus attitudinal variables, both with and without the eighty-one. In every case, removal of the eighty-one resulted in an improved gamma and in a logical direction.

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[10]The determination of the sampling error for a complex design such as that used in this study is quite involved and at best is an approximation. As a general guide in interpreting the percentages reported here, a table for estimating the plus and minus percentage values for the .01 level of significance, assuming a simple random sample, is given for various size N's. The percentage level chosen was 50 percent, which, coupled with the .01 level of significance, should lead to conservative estimates of the range of percentages around our reported values.

Limits of Error in % (+ or -)	.01 Level (1 chance out of 100) Size of N
5	660
6	458
7	337
8	258
9	204
10	165

The "Misunderstoods"

Who are these eighty-one "misunderstoods" and what is their significance? Seventy-two percent are people who voted Yes where they apparently should have voted No and 28 percent voted No when they should have voted Yes. It appears then that the proposition information both before the election and on the ballot proved more confusing to those who were for nuclear power plants than those against. In a close race these "misunderstoods" might have caused the proposition to win even though it was not a reflection of voter attitude. In order to illuminate the identity of these respondents, cross-tabulations were run on ethnic origin, religion, age, length of residence, employment status, income, occupation, education, sex, and party registration. First, there were no significant differences between the Yes and No groups on any of the variables. Comparisons were made with the percentages for Yes and No combined with the total sample values (which include the eighty-one cases). Summarizing the major differences the "misunderstoods" were more Protestant (72 v. 62 percent), older (52 percent > 55 v. 35 percent < 55), lower income (40 percent < $10,000 v. 27 percent > $10,000), less educated (20 percent < high school v. 14 percent > high school), more frequently Republican (44 v. 33 percent).

Thus it seems from our data that the less educated, poorer, and older citizen was most likely to be confused and to vote incorrectly in terms of his own preferences. (Perhaps this finding should lead to improved methods of communicating the issues, particularly through a more clearly written ballot wording.)

III

OVERVIEW OF THE ELECTORATE

In our sample of Sacramento County voters, 98 percent indicated that they had voted on Proposition 15. The vote on the so-called nuclear initiative was judged "very important" by 75 percent of our respondents and "somewhat important" by 20 percent. Only 3 percent expressed the view that it was "not particularly important" and only 1 percent declared it "meaningless."

Interestingly enough, having so overwhelmingly agreed that the decision they made on Proposition 15 was a very important one, 60 percent of our respondents either agreed or strongly agreed with the statement that ordinary citizens do not really influence important decisions in this country.

When asked if they would vote differently in the light of any events or reflections subsequent to the election of June 8, 94 percent of our respondents indicated that they would still vote as they did; 3 percent indicated they would change their vote from No to Yes; 2 percent would change from Yes to No, and 1 percent thought they would not vote at all.

Reasons for Voting

Among those who voted Yes by far the largest number (40 percent) indicated as their reason, in response to an open-ended question ("Why did you vote as you did?"), the view that nuclear power simply was not safe. The next largest category of Yes respondents (20 percent), however, were those who voted for the wrong reasons--from their own point of view--i.e., for example, those saying that they voted Yes because there was need for more nuclear energy no matter what, or that the charges that nuclear energy production was somehow dangerous and unsafe were false. The third largest category was the 9 percent who said that more safeguards were needed; 7 percent indicated that more study was needed before any further nuclear energy production should be allowed to occur; and 6 percent indicated concern with damage to the environment as a feared consequence of continued, as-is operation of nuclear plants. Only 4 percent specifically indicated that other sources of energy ought to be developed as alternatives to nuclear power.

Among those who had voted No on Proposition 15, the largest number (38 percent) indicated the need for more energy supplies as their reason for voting No. The second most significant category of volunteered responses (14 percent) was that the safety requirements of Proposition 15 were excessive. The third largest category was the "misunderstood" vote (8 percent) including responses such as, "I voted No because I don't want nuclear power under any conditions." Significantly, as indicated earlier, the frequency of mistaken voting was very much lower among the opponents of Proposition 15 than among its supporters. The fourth largest category of No respondents (7 percent) indicated that the advantages of nuclear power outweighed the disadvantages; about 7 percent gave the need for continuing technical progress as a reason for their opposition to Proposition 15; the sixth largest category (6 percent) expressed the view that

nuclear plant operations were safe; and 3 percent indicated that the laws passed by the California state legislature on the eve of the June 8 election preempted the purposes of Proposition 15.

The Divisiveness of the Issue

To what extent was the nuclear initiative a divisive issue for the electorate? (See Table 1.)

We found 39 percent of our total sample of voters viewing those who voted opposite them on Proposition 15 as "uninformed"; only 17 percent viewed those voting differently as "biased" and about 6 percent viewed them as "irrational." On the other hand, 54 percent of those giving opinions about the opposition saw it as expressing an "honest difference of opinion." Nevertheless, 25 percent of our respondents agreed with the statement that nuclear power benefits big business, not ordinary people; and 22 percent agreed that the poeple opposing the proposition were concerned only with jobs and profits but not with human safety. (See Table 2.)

Views about Experts and Technology

How did the public view the experts and the issue of nuclear expertise? Only 6 percent of our respondents rated the competence of ordinary citizens to pass on problems of nuclear safety as excellent; 21 percent rated it as good, and 34 percent as only fair. The largest group of respondents, 39 percent, rated the competence of ordinary citizens in this respect as poor. On the other hand, the competence of experts was considered excellent by 20 percent of our respondents and good by 50 percent. Only 20 percent thought the competence of experts was fair and 9 percent thought it was downright poor. Interestingly, however, 68 percent of our sample agreed with the statement that scientists could not agree among themselves on questions of nuclear safety; yet a large majority of our respondents (68 percent) also indicated that the public *ought* to be guided by expert opinion on the problems of nuclear safety.

Overwhelmingly, the public appears to support the view that science and technology have been beneficial to mankind; 87 percent of our respondents agreed with the statement to that effect, 3 percent dissented, and 9 percent expressed no opinion. (See Table 2.)

Views about Opposing Claims on Initiative

How did the public view the claims made by the proponents and opponents of Proposition 15? Twenty-three percent of our respondents disagreed with the statement that passage of Proposition 15 would mean higher utility bills, while 39 percent agreed with it. Thirty-seven percent accepted the claim that halting nuclear production would reduce employment in the state while 21 percent disagreed.

TABLE 1

JUDGMENT OF THOSE WHO VOTED OPPOSITE TO YOU

OPINION	%*
Basically uninformed	39
Honest difference of opinion	54
Biased by selfish interests	17
Irrational, foolish	6
Don't know	13
	(633)

*Totals more than 100% since multiple answers were allowed.

TABLE 2

ATTITUDES TOWARD STATEMENTS CONCERNING

ENERGY, NUCLEAR POWER, AND PROPOSITION 15

STATEMENT	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
On balance, science & technology have brought great benefits to mankind.	1%	3%	9%	54%	33%	(604)
Nuclear power dangerous & serious threat to life & environment.	12	31	23	21	12	(597)
Under appropriate safeguards nuclear power could be asset to country's economy.	6	7	13	51	23	(600)
Should have energy policy which requires conservation & sacrifice in standard of living.	3	10	16	50	21	(599)
Demands of "15" would cripple nuclear industry.	7	23	27	34	9	(594)
Public ought to be guided by experts on nuclear safety.	2	7	23	52	16	(595)
Compulsory fuel rationing should start now.	13	34	28	21	3	(598)
Abundant & cheap energy indispensible to well being of American people.	3	15	25	42	15	(592)
Nuclear power plants safe enough with present regulations.	15	24	29	29	3	(595)
Scientists have not been able to agree on nuclear energy questions.	1	7	24	58	11	(594)
Nuclear power can help protect environment from fossil fuel pollution.	5	11	23	47	15	(603)
In favor of building more nuclear power plants and OK if one were in my area.	24	14	18	34	10	(597)
Uranium for nuclear power is in limited supply and will cost more to mine.	1	9	44	33	12	(578)
Should develop solar, wind, geothermal & other non-polluting energy before spending more money on nuclear power.	4	14	24	27	31	(600)
Acceptance of "15" means higher utility bills.	5	19	38	31	8	(590)

Table cont'd.

TABLE 2, cont'd.

ATTITUDES TOWARD STATEMENTS CONCERNING

ENERGY, NUCLEAR POWER, AND PROPOSITION 15

STATEMENT	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
Should be a surcharge for peak time use of electricity.	12%	35%	27%	21%	5%	(594)
Nuclear power is promoted for benefit of big business, not for consumer.	14	35	25	15	10	(602)
Nuclear power can help conserve other sources of power.	2	6	20	57	14	(599)
Some truth that halting nuclear electricity would reduce state jobs.	4	17	42	34	4	(591)
Have sufficient energy, just need effective conservation and energy efficient devices.	6	28	23	32	10	(594)
Those groups for "no on 15" were not concerned with safety, only profits & jobs.	14	38	26	14	8	(598)
Main purpose of "15" is to assure safeguards, not cut off nuclear power development.	6	24	22	36	12	(597)
Present nuclear power plants costly & inefficient and not in operation large percentage of time.	3	18	38	29	11	(592)
We have technology to cope with waste disposal from nuclear power plants.	15	22	26	31	5	(595)
Nuclear power plant operation should be cut back until more strict safety regulations exist.	9	33	23	23	13	(596)
Should be tax to subsidize local mass transportation.	18	34	20	21	6	(597)
Legislation other than "15" can insure public welfare in regard to nuclear energy.	9	24	31	33	3	(591)
If nuclear plants are not built in Calif. neighboring states will have increase in environmental problems from fossil fuel burning for electricity generation.	6	24	51	18	2	(587)

Eighty-four percent of our respondents agreed with the proposition that it was important for this country *not* to depend on foreign energy sources, while only 4 percent took the view that this was not really important and 12 percent expressed no opinion.

As for the claim made by opponents that Proposition 15 would effectively cripple the nuclear industry in this state, 43 percent agreed with it, while 30 percent disagreed. An overwhelming 72 percent agreed that nuclear power would help to conserve other sources of power while only 8 percent disagreed. However, the view that there was already enough energy in the state and that what was needed was simply more conservation was supported by 43 percent of our respondents and opposed by only 34 percent. More significantly, however, the notion that cheap energy is indispensable to the well-being of the country was supported by 57 percent and opposed by only 18 percent. The view that nuclear power actually protects the environment from pollution was supported by 62 percent and opposed by only 15 percent.

Fears and Views of Alternatives

The principal drawback of nuclear energy plants in the perception of our respondents was specifically the difficulty of safe waste disposal, which was named by 65 percent of the sample as a problem; other concerns were: the danger of terrorism, named by 47 percent; the threat of contamination of the environment, 38 percent; the danger of the effects of an earthquake, 33 percent; a poor public image, 32 percent; the danger of a catastrophic explosion, 22 percent; and high cost, 22 percent. Other, miscellaneous problems accounted for 5 percent of the responses. (See Table 3.)

The feasibility of developing non-nuclear sources of power were rated excellent by 26 percent of our respondents and good by 34 percent. Only 19 percent thought the prospects of such development were poor and 21 percent thought they were fair. On the issue of whether nuclear power with appropriate safeguards would be an asset to the economy, 74 percent of the respondents expressed their agreement; only 13 percent disagreed and another 13 percent expressed no opinion.

However, when asked whether other non-polluting sources of energy ought to be developed, such as solar, wind, geothermal, and others, "prior to spending a lot more money on nuclear power development," 58 percent agreed, only 18 percent disagreed, and 24 percent expressed no opinion. On the question of whether it would be acceptable to build a nuclear power plant in their own particular area, 44 percent of our respondents expressed assent to this; 18 percent did not express an opinion and 38 percent opposed such an idea, with 24 percent of these respondents indicating strong opposition. Given a more ambiguous statement to the effect that nuclear power is a serious threat to life and the environment, 44 percent disagreed with it; 23 percent expressed no opinion, and 33 percent agreed. Only 12 percent of the latter group agreed strongly.

TABLE 3

MAIN DIFFICULTIES WITH PEACEFUL
APPLICATION OF NUCLEAR ENERGY

Difficulty	%*
Danger of catastrophic explosions	22
Contamination of atmosphere by radiation	38
Danger from terrorism	47
Danger involved in waste disposal	65
Danger of earthquake - accident	33
High cost & inefficiency	22
Bad publicity & image	32
	(633)

*Totals more than 100% since multiple answers were allowed.

Attitudes on Conservation

We found that in response to a general question about the desirability of conservation even at the cost of reducing living standards, there was widespread support for retrenchment; 50 percent of our respondents agreed that more conservation, even at the sacrifice of living standards, was desirable and 21 percent of these agreed strongly. Only 13 percent disagreed, with 3 percent of this group being in strong disagreement. Specifically, however, we found that 11 percent expressed willingness to reduce their electricity consumption by 5 percent; about 31 percent by 10; about 30 percent by 20; and 18 percent by 30. However, only 10 percent of our respondents expressed willingness to reduce their electricity consumption by more than 30 percent. (See Table 4.) Nevertheless, 21 percent agreed with the statement that a surcharge was needed for peak time use of electricity, and 5 percent strongly agreed with this; 25 percent agreed to the desirability of an immediate fuel rationing program.

Other Observations

We inquired of our respondents as to sources from which they received information relative to the initiative or to nuclear power; we also asked them to evaluate the reliability of these sources. The results are shown in Table 5 and are discussed in section VIII with reference to the Yes and No voters.

While it appears that a large segment of the electorate is rather apprehensive about various attributes and dangers of nuclear power, there is also a widely based willingness to allow for its use and development, probably even greater willingness than the results of the June 8 balloting would seem to indicate.

A more disturbing aspect of the election, however, seems to us the rather significant polarization of opinions relating to nuclear energy. The partisans of opposite views on Proposition 15 tend not to share most of their basic assumptions about nuclear energy.

TABLE 4

HOW MUCH WOULD YOU BE WILLING TO REDUCE USE OF HOUSEHOLD ELECTRICITY TO CONTRIBUTE TO ENERGY CONSERVATION?

Percentage of electric consumption to be reduced	Percentage of sample willing to effect the the reduction
5%	11%
10	31
20	30
30	18
40	4
50+	6
	100% (470)

TABLE 5

SOURCES FROM WHICH INFORMATION WAS RECEIVED
ON PROPOSITION 15 OR NUCLEAR POWER

SOURCE	Percentage Using Source		Mean* Reliability	SE	
State & local newspapers	95%	(576)	3.4	.04	(506)
Television	94	(545)	3.1	.05	(447)
California voters pamphlet	91	(507)	3.7	.05	(420)
Ballot statement	85	(445)	3.6	.06	(350)
Radio	75	(456)	3.0	.06	(309)
Public utilities	72	(457)	2.6	.08	(308)
Friends & neighbors	71	(419)	2.9	.07	(271)
Bulletins & other publications	71	(439)	3.2	.07	(278)
Billboards	63	(415)	2.2	.07	(245)
Magazines	61	(452)	3.6	.06	(245)
Relatives	52	(389)	3.0	.09	(191)
People at place of work	51	(397)	2.8	.09	(186)
Scientists	51	(413)	3.9	.07	(201)
Elected public officials	38	(388)	2.9	.08	(146)
Clubs & organizations	31	(389)	3.4	.12	(114)
Unions	21	(367)	2.6	.17	(72)
Public employees	21	(370)	3.5	.11	(77)
Out-of-state newspapers	13	(378)	3.3	.19	(49)
Community leaders	9	(357)	3.1	.23	(31)
Professionals	9	(357)	3.4	.20	(33)

*5-point reliability scale from 1 unreliable to 5 reliable.

IV

DEMOGRAPHIC PROFILE OF YES AND NO VOTERS

The perspective on the California Nuclear Initiative can be further clarified by profiling the Yes and No voters in terms of both demographic and attitudinal characteristics.

Sex and Occupation

How did the vote on nuclear power relate to standard demographic categories? One of the more significant differences was a higher anti-nuclear vote among women. While our male respondents could be divided into 41 percent Yes and 59 percent No voters, the division among females was 49 percent Yes and 51 percent No. Among people classified as salaried employees, the division on Proposition 15 was exactly 50-50; among the self-employed the No vote predominated 56 to 44 percent. Among persons classified as retired, the No vote was 68 percent and the Yes vote 32 percent.

Residence Factors

Interestingly, we discovered *no* appreciable difference between the voting of trade union members and their families as opposed to the non-union voters. Among the former, the percentage of Yes votes was 47 and among the latter 45. Of those renting their homes or apartments, 51 percent reported a Yes vote. Among home owners, however, 57 percent had voted no. Classified by urban, suburban, and rural areas of Sacramento County, voters in the urban area divided 50-50 on Proposition 15. In suburban areas 60 percent of respondents indicated a No vote; in rural areas the No vote was 67 percent.

Length of residence was a somewhat significant factor in the nuclear initiative vote. We found that among those who had lived less than six years in their particular locale, 52 percent voted Yes; in the 6-10 year residence category, the Yes vote was 41 percent; among the 11-20 year residents, it was 39 percent; and among the 20 year-plus category, it was only 38 percent.

We discovered that physical proximity to the nuclear power plant at Rancho Seco (measured in 5-mile radii) did not have any significant relationship to the way in which our respondents voted on Proposition 15.

Religion, Age, Marital Status, and Race

Among Protestants, the division of the vote was 60 percent No and 40 percent Yes. For Catholics, the division was 53 percent No and 47 percent Yes. Our few (six) Buddhist respondents divided evenly in their vote. None of our respondents identified themselves as Jewish or "Other." Among a substantial number (seventy-six) identifying their religious preference or affiliation as "none," 58 percent reported voting Yes and 42 percent voting No on Proposition 15.

One of the most significant demographic differences in the vote on nuclear power was by age. (See Table 6.) Among our respondents aged 18-24, 71 percent voted Yes on Proposition 15, and only 29 percent voted No. In the age category of 25-34 the margin of the Yes vote declined to a ratio of 55 to 45. Among those between 35 and 44 years of age, the No vote predominated by a substantial ratio of 59 to 41; among the 45-54 group it predominated by a 62 percent No to 38 percent Yes ratio. In the 55-64 group there was a slight "bounceback" for opponents of nuclear power, with 59 percent voting No and 41 percent voting Yes. However, among persons between 65 and 74, the No vote predominated 68 to 32 percent, and among those 75 and over, 72 percent reported a No vote on Proposition 15, a virtual reversal of the vote among the youngest members of the electorate.

No significant trends in voting on Proposition 15 were related to the number of dependents in the families of respondents. Marital status, however, appears to have been a significant factor. Among single persons, 68 percent voted Yes on Proposition 15. Among married persons, 59 percent voted No; among widowed respondents, 60 percent voted No but among divorced persons the vote was evenly divided between support and opposition.

Classified by race, our sample did not include a sufficient number of respondents to justify firm conclusions. Of the great majority of respondents who classified themselves as "White American" (465), 44 percent reported voting Yes and 56 percent No. Among Mexican Americans (with only fourteen cases reported) 71 percent voted Yes and 29 percent No. Among Black Americans, based on fourteen responses, 43 percent voted Yes and 57 percent No. Among Japanese Americans, based on eleven responses, 55 percent voted Yes and 45 percent No.

Income and Education

Income and education showed different associations with support for and opposition to nuclear power. (See Tables 7 and 8.) Our results indicate a moderate and somewhat uneven tendency linking opposition to Proposition 15 with rising incomes. Thus, among respondents earning less than $4,000 a year the No vote was 46 percent; among those with less than $10,000 it was 45 percent. For those earning between $10,000 and $14,999 a year the No vote was 55 percent, and for those in the $15,000 to $20,000 category it was 61 percent. The figure declined to 51 percent for those earning between $20,000 and $30,000, and rose to 68 percent among persons with incomes in excess of $30,000 annually.

On the other hand, increases in formal education correlated, though also somewhat unevenly, with increased support for Proposition 15. Thus, among those with only an elementary-school education, 65 percent voted No; among those with some high school education, 56 percent voted No. High school graduates voted No by a margin of 65 percent; however, those with some college education were divided almost 50-50 in their vote on Proposition 15. Among those with college degrees, 53 percent voted No and among those with advanced degrees the No vote was lowest at 49 percent.

TABLE 6

RELATIONSHIP BETWEEN VOTE ON "15" AND AGE

VOTE ON 15	AGE						
	18-24	25-34	35-44	45-54	55-64	65-74	75+
YES	71%	55%	41%	38%	41%	32%	28%
NO	29	45	59	62	59	68	72
	(66)	(100)	(87)	(104)	(83)	(62)	(18)

CHI SQUARE = 31.88, p = <.0000
GAMMA = .30

TABLE 7

RELATIONSHIP BETWEEN VOTE ON "15" AND INCOME

VOTE ON 15	INCOME IN DOLLARS					
	<4,000	4,000-9,999	10,000-14,999	15,000-19,999	20,000-29,999	30,000+
YES	54%	55%	45%	39%	49%	32%
NO	46	45	55	61	51	68
	(35)	(82)	(107)	(107)	(101)	(57)

CHI SQUARE = 10.81, p = .05
GAMMA = .14

TABLE 8

RELATIONSHIP BETWEEN VOTE ON "15" AND EDUCATION

VOTE ON 15	EDUCATION					
	Elementary	Some H.S.	High School	Some College	College	Graduate work or degree
YES	35%	44%	35%	49%	47%	51%
NO	65	56	65	51	53	49
	(20)	(39)	(100)	(208)	(88)	(61)

CHI SQUARE = 6.87, p = .23
GAMMA = -.13

Political Identifications

Party affiliations, and differences seemingly related to conservative-liberal political preferences, proved highly significant in relation to the vote on the nuclear initiative. (See Tables 9, 10, and 11.) Among those who identified themselves as Democrats, 54 percent reported voting Yes, while among Republicans only 28 percent reported a Yes vote. Our data for independents and others was not sufficiently substantial to allow meaningful interpretation. However, the relationship between individuals' votes on Proposition 15 and their preferences in the presidential and senatorial primaries proved highly significant. Thus, we found that of those who supported Governor Brown in the presidential primary, 59 percent voted Yes on Proposition 15. Among those supporting Jimmy Carter, generally perceived as somewhat more moderate or conservative, only 46 percent voted Yes. Of those voting for Senator Frank Church, 67 percent supported Proposition 15. Supporters of Representative Morris Udall, generally considered the most liberal Democrat in the race, 73 percent voted Yes on 15. On the other hand, among those who had supported President Ford in the primary, 67 percent voted No on 15. Of those voters who had supported former Governor Ronald Reagan, the No vote was 78 percent.

In the Senate primary, only 32 percent of the supporters of incumbent Senator John V. Tunney voted Yes on Proposition 15, while in contrast 77 percent of the supporters of his more liberal challenger, Tom Hayden, voted Yes. On the Republican side, among the supporters of Robert Finch, 31 percent had voted Yes on 15, while only 24 percent of the supporters of S.I. Hayakawa reported a Yes vote. Among the supporters of Alphonzo Bell, only 14 percent voted Yes on Proposition 15, while none of the followers of John Harmer did.

Multivariate Analysis

The following stepwise multiple regression helps to locate the most "predictive" (at the .05 level) attributes of the demographics and socio-economics relevant to the vote on Proposition 15. (See Table 12.)

In examining Table 12, we note that with only three variables--Republicanism, age, and size of area--we represent all the socioeconomic and demographic variables. However, these variables account for only 10 percent of the total variance in the vote. Thus, it appears that factors other than demographic and socioeconomic variables were critically important in determining the vote on Proposition 15.

TABLE 9

RELATIONSHIP BETWEEN VOTE ON "15" AND PARTY REGISTRATION

VOTE ON 15	PARTY REGISTRATION			
	Democrat	Republican	Non-Partisan	Other
YES	54%	28%	39%	80%
NO	46	72	61	20
	(332)	(165)	(18)	(5)

CHI SQUARE = 31.66, p = <.0000
LAMDA = .12 with vote dependent

TABLE 10

RELATIONSHIP BETWEEN VOTE ON "15" AND SENATE CHOICE

VOTE ON 15	SENATE CHOICE					
	Tunney	Hayden	Hayakawa	Finch	Bell	Harmer
YES	32%	77%	24%	31%	14%	0%
NO	68	23	76	69	86	100
	(103)	(124)	(59)	(16)	(7)	(8)

CHI SQUARE = 79.83, p = <.0000
LAMDA = .45 with vote dependent

TABLE 11

RELATIONSHIP BETWEEN VOTE ON "15" AND PRESIDENTIAL CHOICE

VOTE ON 15	PRESIDENTIAL CHOICE						
	Brown	Carter	Ford	Reagan	Church	Udall	Other
YES	59%	46%	33%	22%	67%	73%	18%
NO	41	54	67	78	33	27	82
	(169)	(81)	(54)	(81)	(21)	(11)	(11)

CHI SQUARE = 44.80, p = <.0000
LAMDA = .21 with vote dependent

TABLE 12

STANDARDIZED REGRESSION COEFFICIENTS
FOR THE PREDICTION OF THE VOTE ON "15"
BY DEMOGRAPHIC & SOCIOECONOMIC VARIABLES

Variable	Beta	% Contribution
Republican	.2009	41.2
Age	.1883	38.6
Size of area	.0983	20.2
Multiple R	.314*	
R^2	.100	

*Significant at <.001

Independent Variables in Regression Analysis

Age:	Ascending order = 1-7
Sex:	Male = 1, Female = 2
Protestant:	Yes = 1, No = 0
Catholic:	Yes = 1, No = 0
No Religion:	Yes = 1, No = 0
Professional:	Yes = 1, No = 0
Manager:	Yes = 1, No = 0
Grey:	Yes = 1, No = 0
Blue:	Yes = 1, No = 0
Student:	Yes = 1, No = 0
Retired:	Yes = 1, No = 0
Income:	Ascending order = 1-6
Length of residence:	Ascending order = 1-4
Democrat:	Yes = 1, No = 0
Republican:	Yes = 1, No = 0
Non-Partisan:	Yes = 1, No = 0
Size of area:	Urban = 1, Suburban = 2, Rural = 3
Education:	Ascending order = 1-6

V

ATTITUDINAL DIFFERENCES BETWEEN PROPONENTS AND OPPONENTS

Views about the Opposition

At the outset, we found that there was considerably more intensity of feeling and antagonism toward the other side among opponents of nuclear power than among its supporters. (See Table 13.) Thus, among those who characterized the opposition as uninformed, 53 percent voted Yes; among those who characterized it as being "biased by selfish interests," 78 percent were Yes voters. Of those who agreed with the statement that the voters on the other side of the issue were "irrational," 56 percent had voted Yes; among those who agreed with the proposition that those voting opposite them merely had an honest difference of opinion, only 32 percent were Yes voters.

In response to the question as to how important the result of the vote on Proposition 15 really was, among those who had voted Yes 76 percent judged the result "very important," and 20 percent as "somewhat important"; about 5 percent regarded it as either not particularly important or even as meaningless. Among the opponents of Proposition 15, 74 percent viewed the outcome as very important, 22 percent as somewhat important; 5 percent saw it as unimportant or meaningless.

The view that people calling for a No vote on Proposition 15 were concerned only with profits and jobs and not with nuclear safety closely followed the vote. (See Table 14.) Among those who agreed with it strongly, 76 percent voted Yes; of those simply agreeing, 89 percent voted Yes. Of those neither agreeing nor disagreeing, 63 percent voted Yes. However, among those disagreeing, 75 percent had voted No, and of those disagreeing strongly, 96 percent voted No.

Drawbacks of Nuclear Power

There was a very wide disparity in the perception of issues between the proponents and opponents of nuclear power. Asked to indicate the main difficulties with the peaceful application of nuclear energy, 75 percent of the supporters of Proposition 15 indicated the danger of catastrophic explosions as a major difficulty; 74 percent viewed contamination of the atmosphere by radiation as another; 72 percent indicated high cost and inefficiency of nuclear power as disadvantages; 67 percent feared the danger of earthquake-induced accidents; 58 percent were concerned about the problems of nuclear waste disposal; 49 percent feared the danger of terrorism and other misuse by people having access to nuclear plants. Although respondents could check off or insert several answers to this question, only 15 percent of the proponents of Proposition 15 agreed with the statement that "bad publicity and image" were among the main difficulties in applying nuclear power to peaceful purposes. (See Table 15.)

TABLE 13

RELATIONSHIP BETWEEN VOTE ON "15" AND
JUDGMENT OF VOTERS OPPOSITE OF YOU

	Voter Opposite							
VOTE ON 15	Basically Uninformed		Honest diff. in opinion		Biased by Selfish interest		Irrational	
	Yes	No	Yes	No	Yes	No	Yes	No
Yes	53%	40%	32%	62%	78%	38%	56%	45%
No	47	60	68	38	22	62	44	55
	(212)	(311)	(285)	(238)	(102)	(421)	(32)	(491)
CHI SQUARE	8.21		45.35		50.55		1.15	
P	.004		<.0000		<.0000		.28	
GAMMA	.26		-.54		.70		.22	

TABLE 14

RELATIONSHIP BETWEEN VOTE ON "15" AND

ATTITUDES TOWARD NUCLEAR POWER

Issue	Vote	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	CHI Square	P	Gamma
On balance science & technology benefit mankind.	YES	100%	88%	60%	48%	31%	32.3	<.0000	.41
	NO	0	12	40	52	69			
		(1)	(16)	(48)	(277)	(163)			
Nuclear power can protect the environment from pollution from fossil fuels.	YES	100	96	61	31	8	155.57	<.0000	.79
	NO	0	4	39	69	92			
		(25)	(53)	(122)	(231)	(72)			
Nuclear power dangerous and serious threat to life and environment.	YES	5	15	52	77	90	191.00	<.0000	-.81
	NO	95	85	48	23	10			
		(57)	(148)	(118)	(108)	(68)			
In favor of building more nuclear plants and one in my area.	YES	94	69	38	12	12	235.00	<.0000	.84
	NO	6	31	62	88	88			
		(128)	(71)	(89)	(163)	(49)			
Should develop non-polluting energy sources before more nuclear power.	YES	21	12	18	50	79	141.08	<.0000	-.72
	NO	79	88	82	50	21			
		(19)	(60)	(124)	(139)	(160)			
Yes on "15" means higher utility bills.	YES	80	63	46	40	8	45.14	<.0000	.41
	NO	20	37	54	60	92			
		(20)	(93)	(189)	(157)	(38)			
Public ought to be guided by experts on questions of nuclear safety.	YES	77	76	55	37	36	31.35	<.0000	.35
	NO	23	24	45	63	64			
		(13)	(33)	(119)	(259)	(77)			
Proposition 15 would cripple nuclear industry.	YES	89	81	47	20	9	158.38	<.0000	.76
	NO	11	19	53	80	91			
		(35)	(123)	(126)	(172)	(43)			
Nuclear power can help conserve other sources of power.	YES	100	84	75	36	12	105.48	<.0000	.73
	NO	0	16	25	64	88			
		(8)	(31)	(105)	(293)	(67)			

Table cont'd.

TABLE 14, cont'd.

RELATIONSHIP BETWEEN VOTE ON "15" AND

ATTITUDES TOWARD NUCLEAR POWER

Issue	Vote	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	CHI Square	P	Gamma
Halting nuclear power would reduce jobs in state.	YES	79%	65%	44%	33%	27%	35.41	<.0000	.40
	NO	21	35	56	67	73			
		(19)	(89)	(212)	(162)	(15)			
Main purpose of "15", is to insure safeguards, not cut off nuclear power development.	YES	10	14	26	70	85	164.53	<.0000	-.76
	NO	90	86	74	30	15			
		(31)	(117)	(103)	(182)	(67)			
Nuclear power for big business, not ordinary people.	YES	8	19	61	81	92	187.6	<.0000	-.80
	NO	92	81	39	19	8			
		(73)	(176)	(127)	(79)	(51)			
Uranium for nuclear power is limited and will cost more to mine.	YES	50	26	36	49	82	50.03	<.0000	-.44
	NO	50	74	64	51	18			
		(6)	(39)	(222)	(158)	(63)			
Under appropriate safeguards nuclear power should be important asset to country.	YES	100	88	79	36	20	131.76	<.0000	.72
	NO	0	12	21	64	80			
		(31)	(34)	(63)	(263)	(112)			
Groups for "no on 15" were not concerned with safety only profits & jobs.	YES	4	25	63	89	76	168.24	<.0000	-.77
	NO	96	75	37	11	24			
		(69)	(194)	(122)	(79)	(38)			
Present nuclear power plants costly and inefficient and not in operation large percentage of time.	YES	6	15	38	60	95	120.79	<.0000	-.70
	NO	94	85	62	40	5			
		(18)	(89)	(166)	(145)	(59)			
We have technology to cope with waste disposal from nuclear power plants.	YES	88	65	33	24	5	127.63	<.0000	.68
	NO	12	35	67	76	95			
		(82)	(123)	(129)	(144)	(20)			
Nuclear power plants are safe enough with present state & federal regulations.	YES	96	72	28	13	17	200.90	<.0000	.82
	NO	4	28	72	87	83			
		(80)	(127)	(141)	(140)	(12)			
Nuclear power plant operation should be cut back until more strict safety regulations exist.	YES	14	8	40	84	91	233.88	<.0000	-.84
	NO	86	92	60	16	9			
		(35)	(164)	(114)	(119)	(68)			

Table cont'd.

TABLE 14, cont'd.

RELATIONSHIP BETWEEN VOTE ON "15" AND

ATTITUDES TOWARD NUCLEAR POWER

Issue	Vote	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	CHI Square	P	Gamma
Generally speaking scientists have not been able to agree on nuclear energy questions.	YES	67%	28%	34%	49%	59%	16.60	.002	-.28
	NO	33	72	66	51	41			
		(6)	(32)	(110)	(295)	(56)			
Legislation other than "15" can insure public welfare in regard to nuclear energy.	YES	58	61	49	30	23	32.55	<.0000	.37
	NO	42	39	57	70	77			
		(43)	(114)	(160)	(163)	(13)			
If nuclear plants are not built in Calif. neighboring states will have increase in environmental problems from fossil fuel burning for electricity generation.	YES	58	55	45	26	43	18.42	<.0000	.30
	NO	42	45	55	74	57			
		(26)	(121)	(258)	(83)	(7)			

TABLE 15

RELATIONSHIP BETWEEN VOTE ON "15" AND PERCEIVED MAJOR DIFFICULTY WITH PEACEFUL APPLICATION OF NUCLEAR ENERGY

VOTE ON 15	DIFFICULTY													
	Explosion		Radiation		Terrorism		Disposal		Earthquake		High Cost		Bad Image	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
YES	75%	37%	74%	27%	49%	42%	58%	20%	67%	34%	72%	38%	15%	59%
NO	25	63	26	73	51	58	42	80	33	66	28	62	85	41
	(117)	(406)	(203)	(320)	(255)	(268)	(352)	(171)	(182)	(341)	(118)	(405)	(157)	(366)
CHI SQUARE	52.10		109.68		2.76		62.74		50.84		41.87		84.37	
P	<.0000		<.0000		.10		<.0000		<.0000		<.0000		<.0000	
GAMMA	.67		.77		.15		.68		.60		.62		-.78	

In stark contrast, only 25 percent of the opponents of the proposition expressed fear of catastrophic explosions and only 26 percent considered contamination of the atmosphere as a serious problem. High cost and inefficiency were acknowledged as difficulties by 28 percent of respondents who voted No, and earthquake-induced accidents were feared by 33 percent; only 42 percent expressed concern over the waste disposal question. The only perception which may be said to have been shared in roughly equal measure by the two sides was the threat of terrorism, an issue recognized as a major difficulty by 51 percent of the proponents of nuclear power. Bad publicity and image were identified most frequently by the opponents of Proposition 15 as a major difficulty in the peaceful application of nuclear energy; 85 percent of respondents who voted No identified it as such. The view that state legislation could preempt the purposes of Proposition 15 with respect to public safety and welfare was substantially accepted by the opponents of "15" and rejected by its adherents. Among those agreeing strongly, 77 percent voted No; among those agreeing, 70 percent voted No; among those undecided 57 percent voted No, while those disagreeing with the statement divided for Proposition 15, 61 percent to 39 percent, and those disagreeing strongly 58 to 42 percent. (See Table 14.)

Views about Consequences of the Election

The view that passage of Proposition 15 would mean higher utility bills was, predictably perhaps, accepted by many more No voters than Yes voters. Sixty percent of those agreeing with the statement that utility bills would be increased by the passage of "15," voted No; so did 92 percent of those strongly agreeing. Among the undecided, 54 percent voted No. Of those disagreeing, 63 percent voted Yes, as did 80 percent of those disagreeing strongly.

An important claim made by opponents of "15" during the pre-election campaign was that passage of the proposition would reduce jobs in the state. Among our respondents the acceptance of that claim related very closely to whether they voted Yes or No. Thus, among those agreeing strongly with this view, 73 percent voted No, and of those agreeing, 67 percent voted No; among the undecided on this issue, 56 percent voted No. But of the persons who disagreed, 65 percent voted Yes; of those disagreeing strongly, 79 percent voted Yes.

What about the claim that Proposition 15 would cripple the nuclear industry? The result here is of particular interest, in part because this line of argument was strongly advanced by opponents of "15," and in part because the attitudes evidenced elsewhere in our survey by supporters of the proposition make it reasonable to believe that for many of them, if not a majority, the elimination of the nuclear industry would be desirable. We found, however, that of those strongly agreeing with the statement, 91 percent voted No and only 9 percent voted Yes. Among those merely agreeing, 80 percent voted No and 20 percent voted Yes. Among those disagreeing, 81 percent voted Yes, and of those disagreeing strongly 89 percent voted Yes.

The acceptance of proponents' claim that the purpose of Proposition 15 was not to stop the development of nuclear industry but rather to insure adequate safeguards for it was very closely related to how people voted.

Among those strongly agreeing with this claim, 85 percent voted Yes; of those agreeing, 70 percent voted Yes; among the undecided, however, 74 percent voted No, and among those disagreeing, the No vote was 86 percent. Among those disagreeing strongly the No vote was 90 percent.

Nuclear Industry Record and Potential

A claim made frequently during the campaign was that nuclear power had proved to be costly and inefficient. Of those who strongly agreed with this contention, 95 percent voted Yes; of those simply agreeing, 60 percent voted Yes. As for the undecided, 62 percent voted No. Among those disagreeing, 85 percent voted No, and of those strongly disagreeing, 94 percent voted No.

On the question of whether "nuclear power can help this country save other sources of power," those who agreed strongly voted against Proposition 15 by a margin of 88 percent to 12 percent; among those agreeing, the margin was 64 percent No to 36 percent Yes. However, among persons who could not decide, 75 percent voted Yes. Eighty-four percent of those who simply disagreed voted Yes, while fully 100 percent of those disagreeing strongly voted Yes.

On the question of whether "nuclear plants operating today [are] safe enough with the present state and federal regulations," 83 percent of those who strongly agreed voted No; of those agreeing, 87 percent voted No. Among the undecided, 72 percent voted No. On the opposite side, of those disagreeing, 72 percent voted Yes, while 96 percent of those strongly disagreeing voted Yes.

On the issue of whether nuclear power plants now in operation should be cut back while more strict safety regulations can be put into practice, those strongly agreeing voted 91 percent Yes; those simply agreeing voted 84 percent Yes. Among the undecided, the balance swung to 60 percent No. Among those disagreeing, 92 percent voted No, while in the disagree-strongly category, 86 percent voted No.

Asked to comment on the proposition that "we have the technology to cope with any safety and waste disposal problems created by nuclear plants," our respondents once again grouped themselves into two rather distinct categories. Those agreeing voted 76 percent No; among those agreeing strongly, 95 percent voted No. Among the undecided, 67 percent voted No. On the other hand, of those disagreeing, 65 percent voted Yes, and of those disagreeing strongly 88 percent voted Yes.

Among persons who thought that the feasibility of developing non-nuclear sources of power in California "in the next few years" was "excellent," 64 percent voted Yes on Proposition 15. Of those who thought it was good, 48 percent voted Yes. However, among those who rated the feasibility of such development as only fair, only 37 percent supported the proposition; and of those who thought it was poor, only 28 percent voted Yes.

Among persons who strongly agreed with the proposition that "under appropriate safeguards, nuclear energy could and should be a very important asset to this country's economy," only 20 percent voted Yes on Proposition 15; 80 percent voted No. Of those who simply agreed with this statement, 36 percent voted Yes and 64 No. However, among those who indicated that they could neither agree nor disagree with the statement, 79 percent voted Yes; of those who disagreed, 88 percent voted Yes; of those strongly disagreeing, fully 100 percent voted Yes.

Among persons who strongly agreed with the statement that "nuclear power can help this country protect the environment from the pollution produced by the use of fossil fuels," 92 percent voted No. Of those who simply agreed, 69 percent voted No. Of those expressing no opinion, 61 percent voted Yes. Among those who disagreed, 96 percent voted Yes, while 25 respondents who indicated strong disagreement cast a 100 percent Yes vote.

Among persons who strongly agreed with the statement that "nuclear power is dangerous and is a serious threat to human life and environment" 90 percent voted Yes while only 10 percent voted No. Of those agreeing, 77 percent voted Yes and 23 voted No. However, among persons unwilling to agree or disagree with the statement, 52 percent voted Yes. Of those disagreeing, 85 percent voted No while 95 percent of the strong dissenters did.

VI

THE CONSERVATION QUESTION

There were rather significant differences in attitudes toward conservation among the two groups of voters. Generally, persons more inclined to conservation, those indicating greater willingness to contribute more to conservation, and those less concerned with energy per se, were also more likely to support Proposition 15. (See Table 16.) Thus, among those who strongly agreed with the proposition that "this country should have an energy policy which requires more conservation, even if it requires a sacrifice in the living standards of the people," 62 percent voted Yes; among those who merely agreed, only 48 percent voted Yes. However, among those who disagreed, 73 percent voted No, and among those disagreeing strongly 86 percent voted No. Given the statement that "with our present knowledge of the limitation of natural resources, it is clear that the standard of living of people in this country has been too high," agreement was elicited disproportionately from the Yes voters. Of those agreeing strongly, 56 percent voted Yes on Proposition 15; among those agreeing, 55 percent voted Yes. Of those who could not make up their minds, 57 percent voted No. Among those disagreeing with the statement, 66 percent voted No, as did 90 percent of those disagreeing strongly.

Importance of Energy

Among persons who agreed strongly that "abundant and cheap energy is indispensable to the well being of the American people," 66 percent voted No; among those simply agreeing with the statement, 65 percent voted No. However, among persons who neither agreed nor disagreed, 54 percent voted Yes. Of those disagreeing with the statement, 64 percent voted Yes, while 60 percent of the strong dissenters voted Yes.

A significant claim made by proponents of Proposition 15 was that adequate energy resources were already available and that what was needed was better and more thorough conservation policy rather than additional or new resources. Given the statement "we have sufficient energy; all we need is a more effective conservation program and to develop better and more efficient energy devices," the response also closely followed the vote. Thus, of those strongly agreeing, 71 percent voted Yes; of those simply agreeing, 59 percent did. Among those unable to decide, 57 percent voted No, while among those disagreeing 70 percent voted No. Of those strongly disagreeing 88 percent voted No.

Measures Needed for Energy Crisis

Confronted with the statement that "compulsory fuel rationing should start now," respondents who supported Proposition 15 were far more likely to agree with it. Among the strongly agreeing, 62 percent had voted Yes; among those agreeing, 60 percent voted Yes. For those who could not make up their minds, the break was virtually even, with 50 percent Yes and 50 percent No votes. However, among those disagreeing, 60 percent voted No, and of those disagreeing strongly 76 percent voted No.

TABLE 16

RELATIONSHIP BETWEEN VOTE ON "15" AND

CONSERVATION ATTITUDES

Issue	Vote	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Chi Square	P	Gamma
Energy policy should require conservation even if it means sacrifice in living standards.	YES	14%	27%	30%	48%	62%	32.71	<.0000	-.40
	NO	86	73	70	52	38			
		(14)	(44)	(80)	(250)	(114)			
Cheap energy is indispensable to well being.	YES	60	64	54	35	34	28.12	<.0000	.34
	NO	40	36	46	65	66			
		(15)	(80)	(126)	(211)	(64)			
Fuel rationing should begin now.	YES	24	40	50	60	62	25.17	<.0000	-.33
	NO	76	60	50	40	38			
		(62)	(170)	(147)	(105)	(16)			
With present knowledge of limited natural resources, it is clear standard of living has been too high.	YES	10	34	43	55	56	26.21	<.0000	-.32
	NO	90	66	57	45	44			
		(20)	(116)	(119)	(195)	(54)			
We have sufficient energy, just need more conservation and energy saving devices.	YES	12	30	43	59	71	50.63	<.0000	-.46
	NO	88	70	57	41	29			
		(26)	(140)	(122)	(162)	(49)			
There should be a tax to subsidize local mass transportation.	YES	28	45	53	49	59	15.53	.004	-.22
	NO	72	55	47	51	41			
		(85)	(165)	(106)	(108)	(34)			
There should be a surcharge for peak time use of electricity.	YES	39	56	52	51	52	10.32	.035	-.18
	NO	61	64	48	49	48			
		(51)	(170)	(136)	(113)	(27)			

Presented with the statement that there ought to be a new tax to subsidize local mass transportation, those who supported Proposition 15 were somewhat more likely to agree with it. Thus, among those agreeing strongly, 59 percent had voted Yes. Among those agreeing, 51 percent voted No, but of those disagreeing, 55 percent voted No. Of those disagreeing strongly, 72 percent had voted No.

Another measure of conservation attitudes was provided by the statement that there should be a surcharge for peak time use of electricity. Of respondents who indicated strong agreement, 52 percent voted Yes; among those who simply agreed, 51 percent voted Yes. Even among those undecided on the issue, 52 percent voted Yes; however, of those disagreeing, 64 percent voted No, and of those strongly disagreeing, 61 percent voted No.

Among persons expressing willingness to reduce electric consumption by as much as 50 percent or more, 54 percent had voted Yes on Proposition 15. Of those willing to cut 40 percent of their consumption, 43 percent were Yes voters. Among those willing to reduce by 30 percent, 61 percent were Yes voters, as were 46 percent of those willing to reduce by 20 percent. Of those willing to reduce by only 10 percent, 67 percent were No voters, as were 63 percent of those willing to reduce by a mere 5 percent. (See Table 17.)

TABLE 17

RELATIONSHIP BETWEEN VOTE ON "15" AND
WILLINGNESS TO REDUCE ELECTRICAL USAGE

VOTE ON 15	WILLING TO REDUCE ELECTRICITY					
	5%	10%	20%	30%	40%	50% +
YES	37%	33%	46%	61%	43%	54%
NO	63	67	54	39	57	46
	(38)	(113)	(120)	(79)	(14)	(28)

CHI SQUARE = 16.70, p = .005
GAMMA = -.26

VII

SOCIO-POLITICAL CHARACTERISTICS

In terms of more general social and political attitudes, we discovered that of those persons in our survey who declared themselves dissatisfied with conditions in America today, 57 percent voted Yes. (See Tables 18 and 19.) Among those expressing satisfaction, only 24 percent voted Yes and 76 percent voted No. Interestingly, however, we found that among those describing themselves as extremely dissatisfied, the division of the vote was virtually even, with 49 percent Yes and 51 percent No, while among those "extremely satisfied" the No vote was 64 percent and the Yes vote 36 percent. Among those in the middle of our scale, reporting neither satisfaction nor dissatisfaction, the vote was 41 percent Yes and 59 percent No. Among persons strongly agreeing with the proposition that "the good things about this country far outweigh the bad," 69 percent voted No and 31 percent Yes. Among those disagreeing we found just the reverse: 69 percent voted Yes and 31 voted No.

Attitudes toward Government, Business, and Science

Among those who agreed that the government gives more than it gets (see Table 20), 64 percent voted No; of those who thought the relationship was about even, 57 percent voted No. In the category of those believing that government asks more than it gives, the majority of No voters was down to 52 percent.

Among respondents who strongly agreed with the proposition that "nuclear power is being promoted in this country for the sole benefit of big business and monopolists, and not for ordinary working people and consumers," 92 percent voted Yes, as contrasted with the 81 percent of those who simply agreed. Of those unable to pass judgment on this statement, 61 percent voted Yes. However, among those dissenting, 81 percent voted No, and among those dissenting strongly, 92 percent voted No. (See Table 14.)

It appears that, on the whole, "experts" and "scientists" were viewed as strongly sympathetic to the continued development of nuclear energy in the state. Thus, in response to the question of whether the public ought to be guided by scientific expert opinion on issues of nuclear energy, among those who agreed strongly, 64 percent voted No on Proposition 15; among those simply agreeing, 63 percent did; however, of those uncertain about it, 55 percent voted Yes, while among those disagreeing, 76 percent voted Yes. Of those disagreeing strongly, 77 percent voted Yes.

Among persons who strongly agreed with the statement that "on balance, science and technology have brought great benefits to mankind" only 31 percent voted Yes on Proposition 15 as compared with 69 percent voting against it. Of those who simply agreed with the statement, the balance was much closer, with 52 percent voting No and 48 percent voting Yes. However, of those who would neither agree nor disagree, 60 percent voted Yes. Among those disagreeing with it, 88 percent voted Yes. (See Table 14.)

TABLE 18

RELATIONSHIP BETWEEN VOTE ON "15" AND
SATISFACTION WITH CONDITIONS IN AMERICA TODAY

VOTE ON 15	Extremely Dissatisfied 1	2	3	4	Extremely Satisfied 5
YES	49%	57%	41%	24%	36%
NO	51	43	59	76	64
	(77)	(160)	(198)	(63)	(11)

CHI SQUARE = 22.47, p = .0002
GAMMA = .27

TABLE 19

APPROVAL OF COUNTRY AND VOTE ON "15"

ISSUE	VOTE	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Good things in this country outweigh the bad.	YES	67%	69%	66%	47%	31%
	NO	33	31	34	53	69
		(6)	(32)	(64)	(231)	(170)

CHI SQUARE = 32.81, p = <.0000
GAMMA = .41

TABLE 20

RELATIONSHIP BETWEEN VOTE ON "15" AND
ATTITUDE TOWARD GOVERNMENT SERVICE

VOTE ON 15	PUBLIC GETS MORE[a]	GOVERNMENT GETS MORE[b]	PUBLIC=GOVERNMENT[c]
YES	36%	48%	43%
NO	64	52	57
	(50)	(299)	(119)

CHI SQUARE = 2.80, p = .25
LAMDA = .00 with vote dependent

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[a]The public gets more from the government than it gives the government.

[b]The government asks more from the public than it gives in help and services.

[c]The help and services that the public gets from the government are worth what it asks from the public.

A somewhat uneven pattern of responses emerged in response to the statement that "generally speaking, scientists have not been able to agree on nuclear energy questions." We find that of those strongly agreeing with this statement, 59 percent supported Proposition 15; however, of those merely agreeing with it, 51 percent opposed Proposition 15. Among those who could not make up their minds, 66 percent voted No. Among those who disagreed with the statement--presumably seeing consensus among the scientists--72 percent voted No. Those strongly disagreeing were too few (six cases) to indicate any trend.

Sociopolitical Integration

We also asked a number of questions relating to the degree of respondents' integration in the institutions and activities of the community. On the whole, the No respondents were characterized by a greater degree of such integration. Thus, among persons who reported frequent church attendance (one or more times a week), 63 percent voted No and 37 percent voted Yes. Among those who reported that they never attended church, or almost never, the balance shifted to 53 percent Yes and 47 percent No. A similar relationship existed among those reporting attending church-related activities. Among the frequent participants, 60 percent voted No while among the rarely-or-never category, 50 percent voted Yes. Among persons reporting frequent (once or oftener per week) participation in meetings of organizations, 56 percent voted No; among those without participation only 50 percent voted No.

Among persons who indicated that if a neighbor had a problem other neighbors would be willing to help, 60 percent voted No and 40 percent voted Yes. Conversely, among those who indicated that neighbors would not be willing to help one another, 64 percent voted Yes and 36 percent No. Of those indicating that many of their neighbors participate in activities and organizations outside the immediate neighborhood, 61 percent voted No and 39 percent Yes. Among those indicating the contrary, 44 percent voted Yes and 56 percent No. Nevertheless, on the question of whether neighbors get together often, among those answering in the affirmative, 56 percent voted No. Of those answering in the negative an even larger percentage, 57, also voted No.

Competence of Citizens and Experts

Among people strongly agreeing that "the ordinary citizen does not really influence important decisions in this country," 53 percent voted Yes and 47 percent voted No. (See Table 21.) Among a handful (19 cases) of those strongly disagreeing, 53 percent voted No and 47 percent had voted Yes. Among the more substantial number (126) disagreeing, 66 percent voted No and 34 percent Yes.

On the question of how respondents would rate the competence of ordinary citizens to determine the issues of nuclear safety, of those who rated it excellent, 61 percent voted No and 39 percent voted Yes. Among those who rated it good, 62 percent voted No, and 38 percent Yes. Interestingly enough, the more unfavorable was the voter's view of citizen competence, the more likely

TABLE 21

RELATIONSHIP BETWEEN VOTE ON "15" AND

POLITICAL ATTITUDES

	Vote	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	CHI Square	P	Gamma
Good things in this country outweigh the bad.	YES	67%	69%	66%	47%	31%	32.81	<.0000	.41
	NO	33	31	34	53	69			
		(6)	(32)	(64)	(231)	(170)			
Elected officials become tools of special interests no matter who is elected.	YES	40	40	42	53	50	6.30	.178	-.15
	NO	60	60	58	47	50			
		(20)	(123)	(154)	(154)	(46)			
None of the politicians in Washington can be trusted.	YES	29	47	45	60	47	12.89	.011	-.18
	NO	71	53	55	40	53			
		(76)	(215)	(148)	(48)	(17)			
People who go into public office are out for all they can get.	YES	29	42	50	43	44	4.65	.32	-.05
	NO	71	58	50	57	56			
		(24)	(125)	(204)	(105)	(45)			
Ordinary citizen does not influence important decisions in this country.	YES	47	34	50	48	53	9.75	.045	-.17
	NO	53	66	50	52	47			
		(19)	(126)	(58)	(203)	(98)			
It is important for U.S. from standpoint of national defense not to depend on foreign energy suppliers such as Arab states.	YES	33	80	64	52	28	43.69	-.0000	.46
	NO	67	20	36	48	72			
		(3)	(15)	(61)	(233)	(196)			

he was to vote Yes. Among those who viewed citizen competence on this issue as only fair, 48 percent voted Yes; of those who saw it as poor, 47 percent voted Yes.

On the other hand, esteem for the competence of "experts" was clearly and directly related to the frequency of No voting. Of those who rated the competence of experts as excellent, 72 percent voted No; of those who rated it good, 62 percent voted No. Of those who rated it fair, a majority, 54 percent, voted Yes; among those rating it poor the majority was even stronger at 56 percent. Thus, even though expert testimony was provided by scientists, officials, and public interest advocates throughout the pre-election period on both sides of the issue, it appears that "expertise" became identified much more closely with opposition rather than with support of Proposition 15. (See Tables 22 and 23.)

Trust in Public Officials

On the issue of whether "elected officials become tools of special interest groups, no matter who is elected," we elicited somewhat more agreement from the Yes voters. To be sure, among those agreeing strongly the break was 50-50, but among those agreeing, 53 percent voted Yes; among those who disagreed, 60 percent were No voters. Of those who disagreed strongly, 60 percent were No voters.

Again, on the proposition that "none of the politicians in Washington can be trusted," we found mixed results among those agreeing, but a greater propensity to disagree among the No voters. Thus, of those strongly agreeing (17 cases) 53 percent were No voters, but among those merely agreeing (48 cases) 60 percent were Yes voters. The division of neither agree nor disagree (148 cases) was 45 percent Yes and 55 percent No. However, among those disagreeing (215 cases), 53 percent were No voters; of those who disagreed strongly (76 cases), 71 percent were No voters.

When asked to comment on the statement that "people who go into public office are usually out for all they can get," the largest group of our respondents (204 out of 503) indicated that they neither agreed nor disagreed with the statement, breaking almost evenly between Yes and No voters. The next largest category (125), however, disagreed with the statement, and in this group 58 percent voted No, while 42 percent voted Yes. The third largest category (105) agreed, and here the result was a virtual reverse: 57 percent No and 43 percent Yes. Among those who agreed strongly (45 cases) 56 percent voted No and 44 Yes. However, among the smallest number of respondents who strongly disagreed (24), 71 percent voted No and only 29 percent Yes.

Among persons who strongly agreed that it was "very important for this country from the standpoint of national defense not to depend on foreign energy suppliers such as the Arab states," 72 percent voted No and 28 percent Yes on Proposition 15. Of those who merely agreed, 52 percent voted Yes and 48 percent voted No. Of those who could neither agree nor disagree, 64 percent voted Yes, and of those disagreeing, 80 percent voted Yes. There were not enough cases in the "strongly disagree" category to permit any meaningful observations.

TABLE 22

RELATIONSHIP BETWEEN VOTE ON "15" AND
ATTITUDE TOWARD COMPETENCE OF ORDINARY CITIZENS ON NUCLEAR SAFETY

VOTE ON 15	COMPETENCE OF ORDINARY CITIZENS			
	Excellent	Good	Fair	Poor
YES	39%	38%	48%	47%
NO	61	62	52	53
	(23)	(89)	(134)	(161)

CHI SQUARE = 2.55, p = .467
GAMMA = -.09

TABLE 23

RELATIONSHIP BETWEEN VOTE ON "15" AND
ATTITUDE TOWARD COMPETENCE OF EXPERTS ON NUCLEAR SAFETY

VOTE ON 15	COMPETENCE OF EXPERTS			
	Excellent	Good	Fair	Poor
YES	28%	38%	54%	56%
NO	72	62	46	44
	(76)	(187)	(77)	(32)

CHI SQUARE = 15.25, p = .002
GAMMA = -.32

VIII

INFORMATION: SOURCES AND CREDIBILITY

Our study indicates that there were significant differences in the sources of information, and the perceptions of these sources, by the two groups of voters.

Among those who volunteered the view that newspapers were their *most important* source of information, 58 percent voted No on Proposition 15, while 42 percent had voted Yes. On the other hand, of those who named television as the most important source, 60 percent voted Yes and 40 percent voted No. Among those who rated bulletins and other mailed advertisements as most important, 73 percent were Yes voters, but only 27 percent were No voters. Among thirty-five respondents who identified "scientists" as their most important source of information, 57 percent reported a No vote. There were no significant differences between the two groups on the most important source with respect to magazines, radio, or the State of California voters' pamphlets. Other sources of information, such as "friends and neighbors," "people at work," "relatives," "public officials," etc., were not mentioned with sufficient frequency to warrant inferences in each case.

The respondents were also asked to indicate from which sources they had got information about nuclear energy or Proposition 15; there were only three sources for which there was a statistically significant difference between those who voted Yes and those who voted No. (See Table 24.) Among those who did *not* identify bulletins and publications there were more No voters (62 percent). Of those who claimed relatives as information sources more were Yes voters (56 percent). Of those who listed clubs and organizations among their information sources, 58 percent were Yes voters. There were some significant differences in the reliability which people in the two groups of voters attributed to these different sources of information.

TABLE 24

RELATIONSHIP BETWEEN VOTE ON "15" AND

SOURCE AND RELIABILITY OF SOURCE OF INFORMATION

SOURCE	VOTE	USED SOURCE YES	USED SOURCE NO	CHI SQUARE P	GAMMA	% According to vote of those saying source reliable*	CHI SQUARE P	GAMMA
State & local newspapers	YES	45%	58%	.40	-.25	44%	.19	.10
	NO	55	42			56		
		(464)	(19)			(190)		
Out of state newspapers	YES	49	48	.93	.01	54	.21	-.38
	NO	51	52			46		
		(41)	(281)			(22)		
Magazines	YES	50	44	.30	.12	56	.34	-.17
	NO	50	56			44		
		(243)	(144)			(112)		
Bulletins & publications	YES	51	38	.03	.26	62	.09	-.19
	NO	49	62			38		
		(275)	(105)			(94)		
Billboards	YES	47	47	.93	.00	53	.02	.15
	NO	53	53			47		
		(227)	(131)			(17)		
Voters pamphlet	YES	48	40	.46	.16	49	.51	.04
	NO	52	60			51		
		(393)	(35)			(202)		
Ballot statement	YES	48	45	.84	.05	46	.02	.16
	NO	52	55			54		
		(331)	(51)			(149)		
Television	YES	44	64	.06	-.40	43	.39	.10
	NO	56	36			57		
		(429)	(28)			(117)		
Radio	YES	46	50	.57	-.08	45	.78	.06
	NO	54	50			55		
		(299)	(88)			(77)		
Friends & neighbors	YES	51	41	.14	.19	54	.67	-.02
	NO	49	59			46		
		(260)	(97)			(63)		
Relatives	YES	56	42	.02	.26	50	.83	.04
	NO	44	58			50		
		(178)	(154)			(44)		
People at place of work	YES	51	47	.44	.09	57	.76	-.02
	NO	49	53			43		
		(175)	(167)			(44)		
Scientists	YES	50	45	.42	.09	42	.12	.29
	NO	50	55			58		
		(186)	(166)			(115)		
Elected officials	YES	49	48	.84	.03	37	.30	.29
	NO	51	52			63		
		(132)	(202)			(27)		
Public employees	YES	48	49	.95	-.02	54	.80	-.23
	NO	52	51			46		
		(71)	(246)			(28)		
Clubs & organizations	YES	58	45	.03	.26	70	.07	-.41
	NO	42	55			30		
		(112)	(222)			(53)		
Community leaders	YES	59	49	.41	.20	56	.85	-.11
	NO	41	51			44		
		(29)	(277)			(9)		

Table cont'd.

*Reliability was measured on a 5-point scale, percentages refer only to two "agree" categories. Chi square and gamma are based on all 5 categories.

TABLE 24, cont'd.

RELATIONSHIP BETWEEN VOTE ON "15" AND

SOURCE AND RELIABILITY OF SOURCE OF INFORMATION

SOURCE	VOTE	USED SOURCE YES	USED SOURCE NO	CHI SQUARE P	GAMMA	% According to vote of those saying source reliable	CHI SQUARE P	GAMMA
Profes-	YES	38%	50%	.29	-.24	33%	.56	.03
sionals	NO	62	50			67		
		(29)	(277)			(12)		
Unions	YES	53	49	.61	.09	36	.40	.38
	NO	47	51			64		
		(60)	(251)			(14)		
Public	YES	47	48	.92	-.02	13	<.00	.77
utilities	NO	53	52			87		
		(284)	(102)			(60)		

IX

CONCLUSION

In order to study public perceptions of the issues related to Proposition 15, and how they might differ for those voting Yes and No, we conducted a mail survey in Sacramento County. One thousand individuals who had voted in the election were selected by a probability sampling technique and were sent questionnaires. We received 633 valid responses which were analyzed by the use of frequency and cross-tabulation statistics for the sample as a whole and for the Yes and No groups, respectively.

The major findings of our study could be summarized as follows: The wording of Proposition 15 appears to have caused considerable confusion among the electorate with relatively greater disadvantage to the *opponents* of Proposition 15. Although substantial numbers of voters on both sides appear to have voted incorrectly in terms of their own preferences for or against nuclear power, the percentage of mistaken Yes votes was considerably higher than the percentage of analogous No votes. The mistaken votes tended to be by persons who were older, poorer, and less educated, and also more frequently Republican than the average in our sample of respondents.

In terms of the entire electorate, it seems evident that Proposition 15 was overwhelmingly regarded as a very important public issue, and that there was very little disposition to change one's mind and vote differently in the aftermath of the election. The concern with inadequate nuclear safety was clearly the dominant consideration among proponents, and the urgent need for energy resources the main concern among the opponents of Proposition 15. Taking the electorate as a whole, the initiative did not produce widespread mutual animosities, e.g., with only 17 percent of the voters seeing those opposed to their point of view as "biased" and only 7 percent seeing them as "irrational." Despite perceptions of disagreements among experts and scientists, the electorate tended to rate the competence of such experts in dealing with problems of nuclear safety much above that of ordinary citizens.

None of the more striking claims made by either side in the pre-election campaign, such as the assertion that passage of Proposition 15 would "cripple the nuclear industry," or increase utility rates, or produce unemployment, or that opposition to the initiative was a big-business conspiracy, received the assent of a majority of our sample of the electorate. As might have been expected, there were generally greater pluralities for the arguments advanced by the victorious opponents of the initiative. However, the electorate as a whole appeared optimistic about the feasibility of developing non-nuclear energy sources in California within the next few years. Some 60 percent of our respondents thought the prospects of this were good or excellent.

Another somewhat contradictory attitude evidenced in our survey was the view agreed to by 58 percent of the sample that "other" sources of energy ought to be developed before "a lot more money" is spent on nuclear plants. The most serious danger associated with nuclear power was seen in the waste

disposal problem, identified by 65 percent of our respondents, followed by the threat of terrorism with some 47 percent identifying it as a principal danger. More than two-thirds of the respondents in our sample indicated willingness to participate in conservation programs involving at least some sacrifice in living standards, and an overwhelming 85 percent thought that it was important for the U.S. not to depend on foreign energy sources.

Dividing our respondents into those who voted for and against the initiative, we discovered some significant demographic and attitudinal differences between the two groups. Support for the initiative was appreciably higher among women than among men; among employees as compared with the self-employed; among younger persons, particularly those in their twenties as opposed to older people, particularly those over sixty years of age; among urban rather than suburban or rural residents, and particularly among those with relatively short periods of domicile. It was also somewhat higher among Catholics than among Protestants.

We found that there was more support for the initiative among the lower income brackets, especially those with annual incomes under $10,000, as compared with the higher income brackets, particularly among those earning more than $30,000 a year. There was a markedly stronger tendency in favor of the initiative among those with some college education as compared with the non-college population.

Some of the strongest relationships between support for Proposition 15 and demographic or attitudinal characteristics were political ones. Thus, we found that only 29 percent of Republican voters supported the proposition as compared with 54 percent among Democrats. Among those Democrats who had indicated support for Governor Brown, 59 percent reported a Yes vote, while among the Carter supporters the Yes vote was 46 percent. In the senatorial primary, 77 percent of the Tom Hayden voters supported the initiative while only 32 percent of the John Tunney supporters did. In the Republican party, of those who had supported Ronald Reagan in the presidential primary only 22 percent voted for the initiative, while 33 percent of the Ford supporters also favored Proposition 15. Only 24 percent of the Hayakawa for Senate supporters in the primary voted for the initiative.

In terms of attitudinal differences, we found somewhat greater intensity of feeling and disapproval of the opposition among the proponents of Proposition 15. There was also a significant tendency toward polarized perceptions of issues. Thus, among those of our respondents who agreed that "abundant and cheap energy is indispensable to the well being of the American people," 66 percent voted against the initiative, while of those disagreeing, 64 percent had voted Yes. Among those who accepted the claim that Proposition 15, if passed, would cripple the nuclear industry, more than 80 percent voted No, while among those who rejected it an equivalent ratio voted Yes. For those who voted in support of the initiative, catastrophic explosions and contamination of the atmosphere by radiation were seen overwhelmingly as the principal threats of nuclear power (with 75 and 74 percent of respondents indicating these as chief problems). Among opponents, only about one-third expressed fear of catastrophic explosions; the largest number, 59 percent of our No

respondents, identified "bad publicity and image" as the most important handicaps in the application of nuclear power. Only with respect to the dangers of terrorism was there a near consensus of outlook between the two groups; it was cited as a significant threat by 49 percent of the Yes voters and 42 percent of the No voters.

We also discovered that there was a greater tendency to support conservation measures among the proponents of Proposition 15 than among its opponents.

In terms of social integration, we found that there was a greater tendency to oppose the initiative among those professing religious affiliation than among those reporting none; among frequent churchgoers than among non-attenders; among those involved in community organizations as opposed to the uninvolved; among those viewing their neighbors as generally helpful rather than indifferent; and among those who perceived the effectiveness of ordinary citizens, as well as the effectiveness of "scientists" and "experts," as high rather than low. In terms of sources of voter information, our survey indicated greater reliance among the opponents of the initiative upon newspapers, and substantially greater reliance upon television among the supporters. There were also considerable differences in the assessments of reliability of specific sources. Illustratively, of those who said they regarded information provided by public utility companies as reliable, 87 percent were No voters, while only 13 percent voted Yes.

As is evident from the comparisons cited in the preceding sections, there are substantial differences in attitudes and perceptions of issues between the Yes and the No groups of voters. Granted, however, that certain views may be much more common in one group than in another, to what extent are the Yes voters accepting of nuclear power under *any* foreseeable circumstances? One of our questions, to wit, "[do you agree that] under appropriate safeguards, nuclear energy could and should be a very important asset to this country's economy[?]" sought to test the pro-nuclear sentiment of people who believe that adequate safeguards have not yet been provided and that presumably they might be in consequence of the adoption of Proposition 15. We discovered that a rather bare majority of the Yes voters, 51 percent, either agreed or strongly agreed with this conditional statement, as compared with 94 percent of the No voters. Another statement, "nuclear power *can* help this country protect the environment from the pollution produced from the use of fossil fuels (for example, burning coal and oil)" also emphasized the *potential* of atomic energy--what it *can* do rather than what it may actually do now. Here we discovered that only 34 percent of the Yes voters were willing to acknowledge this potential, as compared with 82 percent of the No voters. Another such statement was "nuclear power *can* help this country conserve other sources of power." This view elicited a positive response from 50 percent of the Yes voters, whereas 99 percent of the No voters agreed with it.

On the other hand, the view that "nuclear power is dangerous and is a serious threat to human life and environment," agreed to by only 12 percent of No voters, was endorsed by a sizable 63 percent majority of the Yes voters. Similarly, the statement calling for withdrawal of substantial further financial support to peaceful development of nuclear energy, to wit, "we should

develop solar, wind, geothermal, and other non-polluting sources of energy *prior* to spending a lot more money on nuclear development," was endorsed by only 38 percent of the No voters but by 85 percent of the Yes voters. The idea that more energy, rather than merely conservation, is needed by the society was rejected by 57 percent of the Yes voters and only 30 percent of the No group; the view that nuclear plants thus far have been costly and inefficient was supported by 63 percent of the Yes voters as compared with only 23 percent of the No groups. All of these are indicative of a dearth of support for the nuclear industry among those who had voted Yes on "15." Even though 80 percent of the Yes voters in our sample agreed that the purpose of Proposition 15 was *not* to stop the development of nuclear power but to assure its safety, the preponderance of Yes attitudes toward nuclear energy could not fairly be described as supportive.

The fact that 48 percent of Yes voters agreed with the statement that "nuclear power is being promoted in this country for the *sole* benefit of big business and monopolists, not for ordinary working people and consumers," while only 17 percent expressed any reservations about this statement, is amply indicative of these sentiments. Few contrasts could be more lopsided than the equivalent ratios among the No voters, where 76 percent disagreed, and only 7 percent agreed with this notion.

From the data we have analyzed thus far, it appears that the conflict over nuclear power in Sacramento County may be described as one between specific groups. One group contains

--the older, more conservative, and more affluent strata of society, who are more likely to be suburban and rural than urban

--those more favorably disposed toward the national socioeconomic and political status quo

--those more concerned with the maintenance of a high standard of living and national energy independence

--those less worried about and more willing to tolerate a variety of risks and dangers associated with nuclear power.

This group is arrayed against

--the younger, more liberal, less affluent strata, which generally has more formal education

--those less favorably disposed to the national socioeconomic and political status quo

--those more significantly oriented to conservation policies at the expense of overall living standards

--those less concerned with international security aspects of energy self-sufficiency and, more fundamentally, less concerned with the centrality of energy production and consumption in relation to social well-being

--those much more seriously troubled by the risks and dangers associated with the peaceful application of nuclear energy and those generally somewhat more intensely partisan about their preferences.

How "generalizable" are our data? Could these findings, based on a sample of 633 persons, be extended to represent the state as a whole? How would they project nationally? The sample is a very good representation of the Sacramento County electorate. The invariance of the data *after* weighting leads us to believe that the results would probably be much the same for the state as a whole insofar as *ordinal* relationships are concerned. The location of a nuclear power plant in the county did not appear to be a factor influencing the vote on "15." This gives further reassurance that the results would be approximated throughout the state. Our study is probably a good estimate of attitudes for those states whose electorates have demographic characteristics similar to the electorate of Sacramento County.